UNIVERSITY OF ALBERTA

EXPLORING THE PERCEPTIONS OF GOAL STRUCTURES AND ACHIEVEMENT MOTIVATION OF CHILDREN IN BADMINTON CLASS.

by

Nancy Louise Isabel Cavaliere

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of **MASTER OF ARTS**

FACULTY OF PHYSICAL EDUCATION AND RECREATION

EDMONTON, ALBERTA

FALL, 1999

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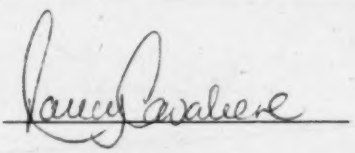

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled **Exploring the Perceptions of Goal Structures and Achievement Motivation of Children in Badminton Class** submitted by **Nancy Louise Isabel Cavaliere** in partial fulfillment of the requirements for the degree of **Master of Arts**.

Dr. E. J. Watkinson

Dr. M. Bouffard

Dr. Y. Bhambhani

Dr. D. Sande

Date: July 2, 1999

DEDICATION

To my grandma Bernice Olive Spencer, to look up but once more and see you smiling down at me. All my love.

ABSTRACT

Goal structure theory suggests that three different goal structures, competitive, cooperative and individualistic, exist within organized academic and physical activity settings. Achievement motivation theory identifies two fundamental performance orientations, ego and mastery, that influence commitment to goal achievement within these settings. The purpose of this study was to explore the ability of fourty-one children, ages seven through fifteen, to distinguish between different goal structured badminton activities using the Perception of Goal Structure Questionnaire. The relationship between these perceptions and scores on a modified version of the Task and Ego Orientation in Sport Questionnaire (Duda & Nicholls, 1992) were examined.

Results supported children's ability to distinguish between goal structures and indicated a positive correlation between mastery orientation and the perception of cooperation and individualism. No significant correlations were found between ego and mastery orientation and the perception of competition, or between ego orientation and the perception of cooperation and individualism.

Acknowledgments

Many hours of work and discussion have contributed to the completion of this thesis. However, without the encouragement and support of several exceptional people not only would completion not have occurred, but neither would have enjoyment. I wish to thank the following exceptional individuals for their contribution to my study, my life and my person.

Special thanks to my supervisor, Jane Watkinson, for seeing in me something I don't always see myself. I am so grateful for the opportunity, the encouragement and the friendship. For all the open doors, I am indebted.

To my committee members: Marcel Bouffard for always making time for discussion and for peppering me with questions I am still trying to figure out. To Yagesh Bhambhani for serving on my committee and for reminding me that an in depth knowlege of statistics is not a waste. To Dave Sande for flexibility and a cheerful willingness to step in at the last minute. Thank you also to Janice Causgrove Dunn for ideas and for facilitating the SPSS process and to Brian Nielsen for valuable bits of advice, whether I wanted them or not.

My gratitude to the children and parents whose participation and interest made this study possible.

To Gina Arena for being the dearest of friends, running will never be the same. To David Legg for inspiring me in the first place, to Tamara Bliss for continual "bliss" and kindness and to Sean Dwyer for friendly competition...we won!

Appreciation to my family for unyielding love and support. To my mom for teaching me openess, to Bev for reminding me to be aggressive and be a leader and to my

dad for being so proud of me, words cannot begin to express... Finally, to my husband Ernie, always my biggest fan. Your faith in me is overwhelming.

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CHAPTER ONE - INTRODUCTION

Participation in organized physical activity, whether it be in the form of physical education classes or in organized sport outside of the school system, can be critical to the development of children. Not only does it provide the opportunity to develop and improve physical skills, it also offers the opportunity to socialize with peers and to develop strategies for problem solving and cooperation. The benefits for a specific child may depend on a number of factors, some of which are partly in the hands of teachers and coaches who organize physical activity, and some of which result from the interaction of these teacher/coach influenced factors with the constructive processes of the learner or participant. Because children bring their own constructive processes to the physical activity setting, the child's disposition to perceive settings in certain ways will be an important factor contributing to what a child acquires through physical participation.

The goal structure of a physical activity setting characterizes the context within which physical activity may occur. Although goal structure theory was initially employed in the description of the classroom setting, it has also established broad and meaningful application within the physical activity domain. Essentially, this theory dictates the goals to be attained, how goal achievement is assessed, and how participants are to relate to each other and the dominant goal within the setting (Ames & Ames, 1984a, 1984b). Three possible setting structures have been identified: competitive, cooperative and individualistic (Johnson & Johnson, 1975, 1985; Ames & Ames, 1984a, 1984b).

Research in the area of the physical activity setting has more recently been

dominated by the concept of the motivational climate (Ames, 1992; Ames & Archer, 1988). Two climates have been proposed to exist, a mastery climate that encourages adaptive behaviors such as persistence and effort, and a performance climate that attributes success or failure to the presence or lack of ability. Unlike the motivational climate, the goal structure of a setting defines the relationship between the participant and the goal and the participants to each other, whereas the motivational climate concentrates on the psychological outcomes of the participant.

Although goal structures, goal orientations and motivational climates are all linked in their attempt to describe setting and or the influences on the perception of the setting, physical education has so typically used competitive, cooperative and individualistic goal structures as a framework for program development that these structures should initially be examined independent of psychological variables. This independent examination of structure will allow for separation of the differences in perception that can be attributed to actual differences between structures and those that may be attributed to the expected psychological outcomes embedded within the motivational climate. This will also permit the exploration of the influence of goal orientation on goal structure perception, whereas the perception of the motivational climate is complicated by its deliberate encouragement of the adoption of a particular goal orientation.

Because the goal structure is a prominent feature of the physical activity setting it will often determine the quality of experience a child may have in the physical activity context. Consequently, these experiences could result in an eagerness to take part in

physical activity, a lack of interest in taking part, or at its most extreme, complete avoidance or withdrawal.

Because of the salience of the structure of an activity setting, its potential impact on the participant, and the many known benefits of participation in physical activity, it is critical that structured settings, such as those that occur within a physical activity class, be developed and implemented so as to enhance the physical activity and life experience of the child taking part. The assumption has been made that because settings have been structured to be competitive, cooperative and individualistic by a teacher/coach that this is in fact how they are perceived by the participant and that these adult understood differences do in fact result in the same differences perceived by the participant. Rarely have professionals in the field of physical activity questioned that these structures may not be perceived as different by children, nor have they considered that the structures may serve a particular purpose for one child and not another. Historically, competition has dominated physical education programming, however within the last two decades cooperative activities have been purported as a panacea for the treatment of such things as lack of ability and poor self-esteem. How the child perceives the structure is a determining factor in the decision of whether or not to take part. Asking the question of whether or not children perceive goal structures in the same way as they are intended is critical to this decision making process.

Support exists for the child's ability to perceive the setting as intended by the instructor, however several mediating factors have also been shown to influence these perceptions. Because children do not enter into a physical activity setting void of

experience, past failures or successes, perceived purpose of activities, motivation for participation or nonparticipation, skill level, group cohesiveness, gender and a predisposition toward particular goal orientations etc... are all factors that might influence their perception of the setting. It is critical to recognize the impact of these group differences and individual differences between children to understand how, why and if their perceptions of the physical activity setting may differ.

Recent literature on motivation in sport has focused on achievement motivation as a key component and mediating factor influencing perception. This type of goal directed inclination, like the motivational climate, has two dimensions: a mastery orientation and a performance orientation. Achievement motivation has been primarily examined in physical activity studies as an outcome of participation in particular goal structures or motivational climates, although it has also been investigated as a predisposition or orientation which may color one's interpretation of events. Determining individual differences in mastery and ego orientations has provided insight into how individuals interpret and respond to achievement settings (Duda, 1992; White & Duda, 1994). Because of the potential influence of goal orientation on perception of the setting, it would seem logical that individuals high in ego orientation and low in mastery orientation would tend to see more competition across all settings, while individuals low in ego and high in mastery would be more likely to perceive cooperation and individualism across all settings.

Additional research focusing on children's perception of the goal structures/motivational climates in physical activity, with consideration given to a

predisposition toward a particular achievement orientation, will likely add to the ability of the teacher or physical activity practitioner to create constructive environments in which children can enjoy the life lasting effects of participating in physical activity and may prevent the negative health repercussions resulting from inactivity (Sallis, Patterson, Buono, & Nader, 1988).

Purpose of the Study

The purpose of this research study was to investigate children's perceptions of three different goal structures implemented within a badminton class. Goal structures, according to Ames and Ames (1984a), refer to how students are evaluated in relationship to the dominant goal of an activity and to each other. Of particular interest to the researcher was whether the child's perception of the structure was congruent with the intention of the teacher/researcher who developed and implemented the competitive, cooperative, and individualistic structures.

The primary goal of this study was to examine whether or not children perceive these goal structures and are able to distinguish between them, in the same way they are intended by the instructor. Understanding the child's perception of the goal structure in a physical activity setting, will aid in the development and implementation of structures that encourage adaptive behaviors. Within this process of examining children's perceptions, the usefulness of the definitions of the three structures presented in the literature by Ames and Ames (1984a, 1984b) and Johnson and Johnson (1975, 1985) for the development of a questionnaire to measure goal structure perception, as well as for

the actual implementation of goal structures in children's physical activities was explored.

Another goal of this study was to examine the potential influence that achievement motivation, "behavior directed at developing or demonstrating high rather than low ability" (Nicholls, 1984, P. 328), has on the child's perception of the goal structure in badminton class. Whether or not a child is high in ego or mastery orientation may affect the degree to which he or she perceives competition, cooperation and individualism across all settings.

The long-term goal of this study was to understand some of the factors mediating the perception of goal structures and to provide clear definitions for the development and implementation of structures perceived by the child as intended by the teacher. Critical to this is the development of goal structures that lead to adaptive behaviors despite potential conflict with individual achievement motivation.

Significance of the Study

Understanding the factors that mediate the child's perception of goal structures, will strengthen the development and implementation of physical activity settings that are perceived by the child as intended by the teacher. This is a critical step in the development of goal structures that lead to adaptive behaviors and positive experiences. Further to understanding these factors, providing clear definitions for the three goal structures that are congruent with the child's perception, will assist in generating guidelines for their implementation. These definitions and guidelines will contribute to

providing practitioners in physical education with the tools necessary to create constructive physical activity environments for children.

As the many benefits of children's participation in physical activity have been well documented in the literature, it is particularly essential to design activity settings that will appeal to children and encourage the adoption of a lifestyle that includes physical activity (Bouffard, Watkinson, Thompson, Causgrove Dunn & Romanow, 1996: Marshall & Bouffard, 1997). Finally, understanding the relationship between individual achievement motivation and the perception of goal structures can bring insight into the development of motivational climates that enhance the aspects of a task mastery orientation while fulfilling a child's need or desire for ego enhancing options. It may lead to an understanding of how to provide children with the necessary growth opportunities to learn to deal effectively with goal situations that may conflict with individual goal orientation.

Delimitations of the Study

The question most central to this investigation was whether or not there was congruence between child and adult perceptions of competitive, cooperative and individualistic goal structures, in adult structured child physical activity settings. A secondary issue was to explore the possible relationship between these perceptions and achievement motivation. Achievement motivation has been primarily linked to goal structures in the literature as an outcome. In this study it will be examined as a possible precursor to goal structure perception. Although goal structures and achievement

motivation have been combined in recent literature (Walling, Duda & Chi, 1993; Papaioannou, 1995; Solomon, 1996) to understand the motivational climate, the goal structures will be developed and regarded as independent of achievement motivation throughout their implementation. One of the long term goals of this study is to enhance adaptive behaviors through the immediate goal of exploring perception.

The participants for this study included children ages 7 through 15 (n = 41) who participated in badminton lessons in two different Edmonton sports clubs.

Limitations of the Study

As a result of the nature of this study and the testing methods involved several limitations existed. In order to capture the child's perception of goal structures, a questionnaire was developed based on the goal structure definitions described by Ames and Ames (1984a, 1984b) and Johnson and Johnson (1975, 1985). These definitions were also used to develop the competitive, cooperative, and individualistic structures of the badminton activities themselves. While a pilot study was conducted to determine children's understanding and steps were taken to ensure that the independent variable was implemented as described, a full examination of the psychometric properties of the Perception of Goal Structure Questionnaire was not undertaken prior to the study.

The sample size for the primary investigation was not large, as it was limited by the number of children participating in local badminton programs and was on a volunteer basis. An assumption was made that the responses on the questionnaires were truthful and represented the children's actual feelings and understanding of the activities that they

participated in.

Definitions

Goal Structure

The goal structure of a physical activity setting outlines which goals are to be attained, how children are to be assessed, and how children are to relate to each other and to the dominant goal within the setting (Ames & Ames, 1984a, 1984b). Essentially, the goal structure characterizes the context within which physical activity may occur. Three different goal structures have been identified in the literature: competitive, cooperative, and individualistic.

Competitive Structure

Within the competitive structure the goals of participants are negatively correlated for success (only one participant can win) (Johnson & Johnson, 1975, 1985). Success is dependent on performance comparisons that determine who is successful and who is not.

Cooperative Structure

Within the cooperative structure participants work collectively toward the attainment of a common goal. The goals of each participant are positively correlated, a goal is only achieved by one if it is achieved by all (Ames & Ames, 1984b; Johnson & Johnson, 1985).

Individualistic Structure

Within the individualistic structure the goals of each participant are autonomous and unconstrained by the goals and performances of others.

Achievement Motivation

Achievement motivation is evident in goal-directed behavior geared at demonstrating ability or the avoidance of demonstrating inability (Nicholls, 1984). The primary goal is that of competence or the perception of competence. Two different achievement orientations are identified in the literature: ego performance orientation and task mastery orientation.

Ego Performance Orientation

The ego performance orientation is comparison based, success is attributed to ability and failure to lack there of. Perceptions of ability are referenced to the ability of others (Nicholls, 1984; Roberts, 1992).

Task Mastery Orientation

In the task mastery orientation success is attributed to effort. The perceptions of ability are dependent on improvement, effort, and are self-referenced (Roberts, 1992, Walling & Duda, 1995).

Motivational Climate

The motivational climate describes the context for physical activity while taking into account achievement motivation. Two motivational climates are identified: a mastery climate that is comprised of elements of the cooperative and or individualistic structures and the mastery orientation, and a performance climate that encompasses the competitive structure and the ego performance orientation.

Hypotheses and Questions

Perception of Goal Structure and Achievement Motivation

For children participating in semi-competitive and competitive badminton programs, it was hypothesized that:

1. There would be differences between children's perceptions of each goal structure implemented within their badminton classes. These differences would reflect the same differences in the intention of the instructor who developed and implemented the structure.

2. There would be a positive correlation between children's perceptions of the competitive goal structure across all settings and the degree to which they are identified as ego performance oriented.

3. There would be a positive correlation between children's perceptions of the cooperative and individualistic goal structures and the degree to which they were identified as task mastery oriented.

4. There would be a negative correlation between children's perceptions of the competitive goal structure across all settings and the degree to which they were identified as task mastery oriented.

5. There would be a negative correlation between children's perceptions of the cooperative goal structure across all settings and the degree to which they were identified as ego performance oriented.

CHAPTER TWO - REVIEW OF LITERATURE

The purpose of this chapter is to examine literature in the area of goal structure theory and achievement motivation. Initially, descriptions of the three goal structures and two dimensions of achievement motivation are presented and discussed, leading to an inquiry into the merging of these concepts to form what is currently termed the motivational climate. Finally, studies that have been performed in the domain of goal structure theory, achievement motivation, motivational climate and perception are reviewed.

The study of goals, goal achievement, and motivation are key concepts in the field of sport and exercise psychology. A goal is a desired result or aspired to outcome. It may be internally driven and constructed, or socially driven and constructed with social norms and consequences. Goals and their attainment are often dependent on and influenced by situational factors. The motivation to achieve goals however, may be more individualized than the goals selected for achievement: for example whether one is intrinsically or extrinsically driven toward the attainment of a goal might rely heavily on an individual's predisposition or preference for a particular type of situational climate .

The goal in achievement settings is to demonstrate ability or to prevent the demonstration of inability (Nicholls, 1984). This description is in keeping with the implication that goals or the attempt to achieve them carry with them social consequences. The striving to achieve particular goals, regardless of their origin or inspiration, occurs within settings that often dictate or prescribe the goal to be attained and the method of attainment.

Determining all the components that exist within a physical activity setting and contribute to its perception, is a complex and seemingly endless task. Much of the research that has attempted to describe the "climate" within a particular setting and the variables critical to its perception, has occurred within the classroom environment. These same concepts and variables that have been recognized as mediators of the classroom climate have been investigated in the physical activity setting, although it is acknowledged that the physical activity setting bears its own set of unique climate contributing variables such as public performance.

Goal Structure

The goal structure of a physical activity setting prescribes which goals are to be attained, how students are to be assessed and how students are to relate to each other and to the primary goal within the structure (Ames & Ames, 1984a, 1984b). It defines the type of interdependence that exists among students during the goal achievement process (Johnson & Johnson, 1975). In addition to characterizing the context within which goal attainment will occur, the goal structure also dictates the procedure for attainment. Three different goal structures have been postulated in the literature: competitive, cooperative and individualistic. Each structure proposes differences in value orientation, action strategies and the importance placed on performance information (Ames & Ames, 1984a).

Competitive Structure

Implicit in a competitive goal structure is the need for comparison to determine

goal achievement. Outperforming others in this type of structure will determine who is successful and who is not. This form of norm-referenced performance comparison results in a negative interdependence among participants (Ames & Ames, 1984a). Because the goals of participants are negatively correlated (only one participant can win), striving to achieve personal goals results in oppositional interaction: if an individual is successful it consequently prevents others from achieving their goals (Johnson & Johnson, 1975, 1985). As success is dependent on performance comparisons, the salience of performance information to each participant increases with the intensity of the competition. How others do is not only critical, but is the final determinant of success therefore multiplying the significance of the comparison. As the probability for success is decreased by the presence of capable others, the competitive structure demands this type of social comparison (Ames & Ames, 1984b).

The competitive structure has traditionally been implemented within organized physical education programs. In the last two decades much discussion has evolved around the value of competition and its relevance within school physical education classes. Literature suggests that the use of competitive activity in physical education is based on widely held assumptions regarding the benefits of competition, such as increased motivation, confidence and self-esteem (Brown & Grineski, 1992). According to Fait and Billing (1974), the opposite of such assumptions is likely to occur in competitive structures, as failure is a required dimension of direct face to face competition. Students who continually experience failure in these types of situations have demonstrated patterns of behavior strategies aimed at avoiding failure rather than

achieving success. Likewise, competition among children is often at the physical, emotional, and psychological expense of the other participants (Bird, Cripe, Morrison, 1980, Fait & Billing, 1974, Kulewicz, 1981). Specifically of concern are children who lack the skill to compete, develop patterns of avoidance and over time completely withdraw from participation. Because of the unique opportunities offered by physical education for socialization, these children not only miss out on motor skill development by dropping out of activity, they also surrender the opportunity to be with peers who are taking part, which may lead to more serious developmental problems than lack of motor skill.

The value of competition within physical education has not only been questioned because of the potentially damaging physical and psychological outcomes for the participants, but also because of its contradiction with the primary goals of physical education: to provide opportunities for skill learning and development (Brown & Grineski, 1992). Physical education should encourage the participation of all children in an arena that allows for mistakes and encourages persistence. Orlick and Zitzelsberger (1996), identify several problems with overdoing competition, but also suggest that it can be the optimal platform for the pursuit of sporting excellence and can provide many humanistic teaching opportunities. Hager (1995), suggests that the difficulty with competition in physical education is not with competition itself, but rather the way in which it is implemented. Introducing competition following the attainment of basic skills, not overemphasizing winning and restructuring competitive activities to allow for more skill leaning and practicing opportunities would remedy many of the arguments

against the use of competition in school physical education (Hager, 1995).

Cooperative Structure

Contrary to the dependence on the poor performance of others in the competitive structure to improve the plausibility of success, participants in a cooperative structure rely on the capable performance of others to increase the likelihood of goal achievement. In this setting participants work collectively to attain the desired outcome. According to Johnson and Johnson (1985), a cooperative structure involves an interdependence among students, resulting from the sharing of a common goal. This goal can only be attained by a particular student if it is attained by all who are linked to the goal, therefore shared responsibility and effort on the part of each individual in the group is critical for success. Although the ability or skill level of each participant in the group may vary, each participant plays a role in the performance outcome of the group. Within this structure, the goals of each person are positively correlated, if one group member experiences success then the entire group succeeds, likewise if an individual does not attain his or her goal the whole group does not succeed (Ames & Ames, 1984b; Johnson & Johnson, 1985). Consequently, this positive correlation demands the effortful participation of all group members toward goal achievement. Positive interdependence, individual accountability for group success, interaction within small groups and promotive interaction (the giving and receiving of encouragement and support), characterize the cooperative structure (Johnson & Johnson, 1985). According to Johnson and Johnson (1985), intrinsic motivation, an interest in learning and challenge, and increased task persistence, characterize the potentials effects on the individuals taking part in the this

structure.

The cooperative structure has been seen as a panacea to the problems encountered with competition in physical education. According to Orlick (1986), children want to play, achieve their own goals and have more freedom to simply have fun. Cooperation is seen to be mutually reinforcing and fulfilling of the purpose of physical education by offering opportunities for development and practice (Fait & Billing, 1974) and by providing a positive arena for socialization (LeDrew, 1997). Cooperative activities seek to level the playing field by reducing the salience of performance outcomes and focusing on the process. As well these structured activities attempt to promote the inclusion of all children regardless of skill level. Lacking within this structure however, is the opportunity for children to gain independence by working and problem solving independently and learning to effectively manage when dealing with failure.

Individualistic Structure

Unlike the competitive and cooperative settings, success in the individualistic structure is independent of the presence of others and of their performances. The goals of each participant are autonomous and are unconstrained by the goals and performances of others. Therefore, there is no interdependence among participants and no correlation between their actual goals or goal achievement (Johnson & Johnson, 1985). However, despite the independence of goals, the individualistic structure may be viewed from both a competitive and noncompetitive framework. Although the performance of others is not critical in determining goal achievement, a performance that is self-referenced (comparison of one's own performance to past performances) does in essence presuppose

competition with oneself. The desire to improve over a past result or to exert a greater amount of effort on the next trial is a form of indirect competition, though still independent of others. Norm-referenced competition may also occur within an individualistic structure wherein an individual attempts to attain a set standard. However, if this comparison is with standards that are realistically attainable, yet challenging to the participant, a noncompetitive form of individualism will develop (Ames & Ames, 1984a).

In many ways the individualistic structure combines those aspects of the competitive structure (competition with one's self) and elements from the cooperative structure (a focus on process) that are both valued. Although, the individualistic structure offers the most opportunities for practice and skill development it overlooks the critical elements of socialization and group participation.

Arguments have been made for the importance of using or not using all three of the above described goal structures in physical education classes. Given the potential benefits and hazards of all three, programming that seeks balance in structure may be most beneficial . Nicholls (1992), calls for diversity in the sport and physical education curriculum in terms of structuring activities. Ultimately the decision to take part is in the mind of the individual (Benham, 1985), therefore providing opportunities to take part in all types of structures would connect with the most children and expand their experiences within the physical activity domain.

Achievement Motivation

The exploration of motivation in the area of physical activity has become a critical

health and active living issue as fewer children are choosing to engage in moderate to vigorous physical activity (Simons-Morton, Baranowski, O'Hara, Parcel, Huang, & Wison, 1990). Motivation encompasses cognition, social factors and individual personality variables, that rise to action when a person engages in an activity wherein evaluation may occur, or there is an attempt to achieve some standard of excellence (Roberts, 1992). This standard of excellence could embody improvement as one of its essential elements. The motivation to learn can be described as "the degree to which students commit effort to achieve goals that they perceive as being meaningful and worthwhile" (Johnson & Johnson, 1985, p.250). Given this description of motivation and the known health concerns for children resulting from inactivity, it is of issue to examine the overt differences in amount of effort, persistence, and the choice to rise or not to rise to action, demonstrated by children when taking part in a physical activity setting. This paradigm of inquiry has recently been examined via achievement motivation.

Motivation is the drive an individual possesses based on intrinsic and extrinsic variables toward the attainment of a goal. According to Dweck (1985), the most critical feature of motivation is the presence of behavior that is goal-oriented. Nicholls (1984) identifies the goal of competence or perception of competence, as the distinguishing feature of achievement behavior. He suggests that the motivation for goal attainment stems from a need to demonstrate ability or to avoid demonstrating inability. Achievement motivation is therefore an individual's commitment toward attaining a particular goal. An individual's goal orientation is proposed to "impact how that person cognitively and affectively responds to and acts in achievement settings" (Duda, 1996,

p.291). Two different types of achievement motivation orientation or involvement have been identified in the literature: ego performance orientation and task mastery orientation. Although these two types of achievement motivation are independent of one another, they are not mutually exclusive. An individual may be high or low in one or both types of orientation.

Goal orientation has been well tested in the literature. Results have consistently demonstrated differences among participants in orientation in relation to beliefs about success, motivation and enjoyment occurring in physical education (Duda, 1996). "Goal orientation theory is grounded in contemporary achievement goal theories of motivation," (Duda, 1996, p.290). Within these frameworks, goal structures are assumed to be critical influences on involvement in achievement activities (Duda, 1996).

Ego Performance Orientation

Goals involving ego and performance orientation encourage achievement behaviors in situations where social comparison is critical, and the perceptions of ability are referenced to the ability of others (Nicholls, 1984; Roberts, 1992). In order to perceive one's ability as high, an individual must outperform others (Nicholls, 1984). As comparison forms the basis for determining success in this orientation, inaccurate perceptions of competence may be facilitated. This becomes problematic for participation, as another aspect of ego involvement is the belief that ability is unchangeable, therefore the likelihood of success is beyond the immediate control of the individual. This may potentially result in a feeling of helplessness. Because consistently maintaining high perceptions of competence is unlikely as this is determined by

consistently outperforming others, children dominated by an ego performance orientation have demonstrated maladaptive behaviors when faced with failure or demanding tasks (Solomon, 1996). These maladaptive behaviors might include a lack of persistence and/or effort, demonstrated avoidance or complete withdrawal from the achievement setting.

Task Mastery Orientation

Task mastery orientation is viewed as the more desirable type of achievement motivation as it has been demonstrated to lead to adaptive behaviors, such as increased persistence and effort when confronted with difficult tasks, task acquisition strategies, self-evaluation, and overall increased motivation (Ames & Ames, 1984b; Fox, Goudas, Biddle, Duda & Armstrong, 1994; Solmon, 1996). Unlike ego performance orientation, successes are attributed to effort and not to ability or luck. The perceptions of ability are dependent upon improvement and learning, and are self-referenced (Roberts, 1992; Walling & Duda, 1995). Within this orientation is a focus on the development of new skills, improving on what has already been learned, and attaining a sense of mastery based on a set of internalized standards (Ames, 1992). A greater willingness and preference for challenging tasks is also demonstrated. Effort is viewed by participants as leading to greater mastery and higher ability, and participants exhibit a propensity toward tasks that require effort.

It is critical to note that the differences in ego and task orientations do not rest solely in a process versus outcome framework, but also in the individual cognitive processes a child goes through when taking part in physical activity (Duda, 1996). As a

result, it makes sense that children with differential orientations towards achievement may carry these orientations into competitive, cooperative or individualistic physical activity structures, thus subverting the intentions of a teacher in implementing a particular goal structure.

Motivational Climate

In more recent literature the concepts underlying goal structure theory and achievement motivation have been amalgamated to create a new description of context for physical activity, termed the motivational climate. Within the motivational climate are features of the setting as well as elements intended to influence motivation. Roberts (1992) has identified two separate motivational climates: a competitive performance climate and a mastery climate. Both climates contain elements of goal structures and achievement motivation and were designed to encourage the adoption of a particular achievement behavior. The preferred achievement orientation in the field of education is that of task mastery as a result of the adaptive behaviors it is seen to encourage.

The competitive or performance focused climate encompasses numerous elements that have been described within the competitive structure and the ego performance orientation. The second motivational climate described is the mastery climate, which contains many of the aspects present within the cooperative goal structure, as well as the characteristics found within a task mastery goal orientation. Although some of the variables contained within the individualistic goal structure, such as independent goals, do not apply to either motivational climate, the competitive and noncompetitive aspects

previously discussed do apply to the performance and mastery climates respectively.

Despite this recent merging of goal structures and achievement orientations into two motivational climates, there remains value in treating them independently. Goal structures are tangible variables within a setting that can be manipulated by a teacher, although they may also appear in unstructured play (for example at recess). Achievement motivation has been examined as an outcome to participation in a setting and has also been proposed to influence perceptions of climate (Causgrove Dunn, 1997). Treating these two elements as independents allows for the possibility of exploring goal structures and orientations that may appear incompatible in nature, but often occur simultaneously in physical activity contexts. For example, a child who demonstrates a strong predisposition toward the ego performance orientation and a weak tendency toward the task mastery orientation may experience participation within a cooperative goal structure as extremely arduous and unsettling. This type of conflict may result in a demonstrated difficulty to adapt to the demands of the structure or possibly the appearance of maladaptive behaviors such as lack of effort or withdrawal. It is possible however, that given the appropriate framework, a child with such a conflict may in fact be encouraged to assume aspects of the task mastery orientation through participation in and awareness of the constraints of the cooperative structure without demanding that they change the orientation toward which they have a natural propensity. This has yet to be examined as a possible outcome of participation in a particular goal structure exclusively, although it has been examined as an outcome of the motivational climate (Ebbeck & Becker, 1994; Kavussanu & Roberts, 1996 Papaioannou & Macdonald, 1993; Seifriz, Duda, & Chi,

1992; Treasure &Roberts, 1995). As well this potential conflict raises issue regarding the importance of a teacher malleable setting in order to enhance children's experience within the physical activity environment. Furthermore, this type of prescribed environment may also provide a child with strategies to cope with conflicting goal structures and achievement motivation in structured and unstructured play.

Finally, the bulk of the research in goal structures and motivational climate has taken place in structured educational or sport settings in which climate can be manipulated to some degree by teacher expectations. Goal structures may exist spontaneously in unstructured play, and it may be beneficial in the long run to determine if children can perceive these structures independently of the many factors (social and affective) that may influence their perceptions of how they personally would/will behave in them.

Perception of Goal Structure and Motivational Climate

Perception is one of the most critical factors influencing a child's decision of whether or not to take part in a physical activity setting. Loosely defined, perception is an individual's understanding or interpretation of reality. This understanding is influenced by various internal factors such as past experience, activity interest and value, and achievement motivation, as well as external factors such as peers, goal structures and motivational climates.

Perceptions are highly subjective and not necessarily accurate representations of reality (Enns, 1966). Any reaction to a situation is more a function of perception than it

is a function of the objective reality of the situation (Marsh, 1970). Because perception is individually based, children vary significantly in how they perceive the environment in educational setting (Ward, 1982). This claim is supported by Winne and Marx (1982), who found that students might also interpret events in ways other than what was intended by the instructor. Herein lies one of the greatest challenges in the administration and teaching of physical activity. Is it possible to create a goal structure that is perceived by the student as intended by the teacher in order to take advantage of the adaptive behaviors that theoretically arise when children participate in particular settings?

There is conflicting evidence in the literature regarding children's ability to accurately perceive the goal structure and motivational climate of a particular physical activity setting. Johnson and Johnson (1981) examined the effects of individualistic and cooperative learning experiences on the interethnic interaction of51 fourth grade students. Students in this study were assigned to two different learning conditions that had either a cooperative goal structure focus or an individualistic goal structure approach. Although the primary purpose of the study was to examine the outcome of participation in each structure on student interaction, it also revealed differences in the children's perceptions of the two conditions. Scores on attitudinal measures of cohesion, peer academic support, and cooperation scales indicated that the children in this study were in fact able to distinguish between and accurately perceive the two different goal structures implemented by the teacher in the classroom, as well as those that occurred naturally in free play activities. Not only did the students perceive the two structures differently, students within the cooperative structure demonstrated a positive interdependence with

the other members of their group and also perceived this interaction to be supportive and encouraging.

Perceptions of ability have been demonstrated to influence the perception of particular goal structures. Dembo and McAuliffe (1987), found that perceived ability of fifth and sixth grade students affected the interdependence within the cooperative goal structure. Interdependence is one of the primary descriptors of this goal structure and is critical in determining interaction among students. In this study, students who had high perceived ability tended to dominate the cooperative structure. This resulted in an inequality among students regarding input and effort, and resulted in the perception of the cooperative structure as being more competitive. Although the cooperative structure acknowledges the inevitable disparity between ability levels of group members, success within this setting should still demand shared responsibility and effort on the part of all group participants. This raises the issue of how to categorize activities wherein the apparent distinguishing features between structures or climates are blurred by the presence of other variables such as perceived ability. As well, there are certain activities that may share aspects of more than one goal structure. For example, soccer calls for cooperation among team members as one goal and outperforming the other team as another primary feature. Other studies that have examined perceived ability have confirmed that it can distort the perception of goal structures and motivational climates to be something other than what was intended (Jagacinski & Nicholls, 1984; Papaioannou, 1995; Vlachopoulos & Biddle, 1997).

Ames and Ames (1984a) suggested that if there is any ambiguity regarding the

intended goal structure that students will frequently translate this uncertainty into a competitive situation. This is in keeping with the finding that perceived ability is an important mediating factor in the perception of goal structures and motivational climate. As well, perceived competence is seen to be a critical moderator of achievement behavior (Williams, 1994).

Solmon (1996), found that not all students perceived the motivational climate or physical activity setting in the same way, but that their perceptions did accurately reflect the intended motivational climate. In this study the perceptions of 109 seventh and eighth grade students placed in ego and mastery motivational climates implemented in physical education classes were examined. Students were assigned to either an ego or task involved climate for a period of two activity sessions. Based on the coding of the ego and task involved statements accrued through an interview process, it was apparent that the students were able to accurately perceive the climate differences in the two conditions created by the teachers. Solmon went further to examine the behaviors encouraged by the different climates and found that within the mastery climate the adaptive behaviors predicted by a task mastery orientation were exhibited by the majority of the students within that setting. The students ability to perceive the distinguishing features in each climate was further emphasized by the practice behaviors adopted by the students in both motivational climates.

It appears that children are capable of perceiving the distinguishing features of the motivational climate in a particular physical activity setting, although more research concentrating solely on the structural features is required to further support this statement.

However, these accurate perceptions are dependent on the clarity of the motivational climate, as perception is easily complicated. Students can also perceive individualistic and cooperative goal structures within a classroom activity. There is an absence of research done to show that competitive, cooperative, and individualistic goal structures are also perceived in physical activity. Difficulty in perceiving these structures or climates may also occur when salient mediating factors such as the perception of competence, past performance and achievement, influence the perception of the context or actually alter the implemented condition. If, however the contextual features are definite and attentively implemented, then despite the presence of interfering variables, children should still be capable of perceiving the intended structure or climate. Maintaining the goal structure of an activity within a free play setting may be problematic however, because of the inherent lack of teacher implemented structure in the environment. If the tendency is to perceive climates as more competitive in the presence of other salient features, children require effective strategies to cope in situations that may not appeal to their natural achievement motivation disposition in order to prevent withdrawal from participation.

Influence of Perception of Motivational Climates and Goal Structures on Achievement Motivation

The influence of the perception of goal structures and motivational climates on achievement motivation has been frequently examined and well documented in the literature. These perceptions have been primarily evaluated in terms of the types of

achievement motivations they tend to precipitate. The type of achievement goal that is aspired to is a function of situational factors, such as motivational climate and goal structures, as well as individual differences (Dweck, 1985). Ames and Ames (1984a) support the concept that the type of goal structure within a setting can influence the achievement motivation adopted by the participant.

The recent preference toward the motivational climate over the use of goal structures is in part due to its apparent influence on achievement motivation and behavior, although this type of influence has been documented as an outcome of participation in different goal structures as well. According to the literature, having a task mastery orientation is preferred because of the adaptive behaviors that it has been shown to elicit such as persistence and effort. Therefore, a mastery motivational climate is also advocated because of the supporting literature to suggest that it encourages the adoption of a task mastery goal achievement orientation. Furthermore, children demonstrating a high task mastery orientation appear to have more motivation and higher levels of enjoyment in sport than those with a strong ego performance orientation (Fox et al., 1994). Cooperative and individualistic structures to a lesser degree, have been heavily advocated for use in physical activity settings. They have been assumed to lead to similar adaptive behaviors demonstrated by children who are highly mastery oriented and used to prevent the forming of maladaptive behaviors assumed to result from participation within competitively structured activities.

Ames and Archer (1988) examined the relationship between the perceived motivational climate of the classroom and the motivational processes adopted by 176

junior and senior high school students when functioning in different climates. As predicted, results of this study indicated that the perception of a mastery climate by the students resulted in a preference for challenging tasks and an enhanced belief that success is achieved through effort. These results garner support for the view that adaptive behaviors result from a task mastery orientation that is facilitated by the perception of a mastery climate.

The influence of the perceptions of social, contextual, and personal factors in determining orientation was examined by Ebbeck and Becker (1994) in youth soccer. The results indicated that the predictor variables did in fact account for variance between goal orientations. Higher task mastery orientation was associated with higher perceptions of a mastery climate and lower scores on the perceived performance climate.

Covington and Omelich (1984), explored whether varying learning structures resulted in different motivational orientations in college students. Students were assigned to either a task oriented structure or a competitive structure. The task structure resulted in greater achievement due to more time and effort spent on practicing the task. Once again, the facilitation of the adaptive behavior of applying effort is consistent with a task mastery motivational climate.

This relationship between situational variables and their influence on achievement motivation orientations was also explored in a 1981 study by Skon, Johnson, & Johnson. The effects of the competitive, cooperative and individualistic goal structures on achievement and acquisition of superior reasoning strategies were explored among grade one students. As hypothesized by the investigators, higher level reasoning strategies were

elicited by the cooperative structure, a predicted result of participation in a mastery setting. As well, cooperative interaction promoted higher achievement compared with the competitive and individualistic learning situations. Ability level of the children in the study did not appear to have any differential effects on the results.

Ames and Ames (1981) found that children's ego orientation covaried with the competitive structure, whereas task mastery orientation covaried with a cooperative structure. These results were supported by a 1984 study by Ames, that examined achievement attributions of fifth and sixth graders in individualistic and competitive goal structures. The purpose of this study was to determine if these structures did in fact elicit difference achievement motivation behaviors. Ego orientation was seen to covary with the competitive structure as more ability attributions were made by participants when participating in this setting than in the individualistic setting. Task mastery orientation covaried with the individualistic structure as more attributions were made to effort than to ability.

From the evidence presented here and the abundance of supporting literature, it is acknowledged that both perception of goal structures and motivational climates enable different achievement orientations. Also well supported is the conception that cooperative structures and mastery climates encourage the adoption of the task mastery orientation, whereas competitive structures and performance climates are linked more heavily to ego orientation.

Influence of Achievement Motivation on the Perception of Goal Structures and Motivational Climates

The majority of the literature regarding achievement motivation examines it from an outcome perspective. Although this can be valuable from a behavior modification viewpoint, it does not account for children who are predisposed to an orientation prior to participation in a particular context. Commensurate with the findings that task and ego orientations arise from participation in task/cooperative and ego/competitive climates/structures respectively, achievement orientation would likely not only be an outcome but also a predictor of setting perception. Moreover, this predisposition would "act as major organizing principle that impacts individuals' understanding of what an achievement activity is about and how it works" (Duda & White, 1992, p.335). Understanding the individual differences in ego and task orientation brings insight into how individuals make sense of achievement settings (Duda, 1992).

Williams (1994), investigated the goal orientations of 152 high school athletes and their preferences for sources of competence information. Consistent with the researcher's hypothesis, participants higher in ego orientation had a greater preference for norm-referenced performance based comparison information, whereas athletes higher in task orientation preferred self-referenced performance information. This would suggest that regardless of the actual goal structure or motivational climate of the context, individuals would perceive the salient information of the context that would be consistent with their achievement orientation.

As differences in orientation predict preferences for sources of performance

information, it is not surprising that achievement orientation would also predict a preference for a particular goal structure or motivational climate. Treasure and Roberts (1995) support the claim that dispositional goal achievement will influence the perception of the context as a result of this type of preference, however they also acknowledge that if contextual cues are stronger than the predisposition a particular achievement motivation may be overridden.

Individual difference in achievement motivation is not the only variable that will influence the perception of the goal structure or motivational climate. Martinek and Karper (1984) found that teachers' differential treatment of children based on expectations of ability also influenced the perception of the motivational climate in elementary physical education classes. This suggests that it is not solely a question of structure or climate that determines the salience of the numerous situational variables for each participant within a particular physical activity setting (Causgrove Dunn, 1997).

White and Duda (1994), examined the degree to which differences in ego and mastery orientations coincided with participant's motives for taking part in sport. The Task and Ego in Sport Questionnaire was used to assess the goal orientation differences of 235 male and female youth and adults. Male athletes were found to be higher in ego than females and less task oriented. Reasons for taking part in activity were found to coincide with differences in orientation. The results revealed that participants who were high in task orientation identified skill development and increased fitness as primary reasons for taking part, while individuals high in ego viewed recognition as a significant factor. This study supports the view that the perception of competition does vary as a

function of goal orientation.

Synthesis of the Literature

In summary, there is evidence to suggest that different goal structures and motivational climates exist within structured and unstructured physical activity settings, and that these structures/climates may or may not be mutually exclusive. As well, the perception of these settings has been demonstrated to influence the achievement motivation patterns of participants. Achievement motivation that is mastery oriented and purported to stem from a mastery climate, has been associated with adaptive behavior such as persistence, whereas high performance orientation encouraged by a performance climate, leads to maladaptive behaviors, such as lack of effort, when confronted with difficult tasks. This has been emphasized in the literature through the advocation of cooperative structures and mastery climates as those best suited for the purposes of physical activity (Papaioannou & Macdonald, 1993).

Despite the apparent and logical preference for cooperative and mastery climates in the area of physical activity, it is unrealistic to propose that competitive structures and performance climates are not valuable to this experience. Competition is inherent within sport and everyday living. Eliminating competition from organized physical activity also removes learning and coping opportunities from participants. Perhaps more critical to the physical activity experience is the method of activity implementation that requires further investigation and not the structure itself.

There is a wealth of literature that examines the impact of structure and climate on

the adoption of a particular achievement orientation however, considerably less research has been conducted to investigate the effects of an individual's predisposition toward an orientation on the perception of the setting. Implications from the studies that have been done suggest that children are in fact capable of perceiving the intended goal structure or climate of a setting, but that achievement motivation and other personal and situational variables may or may not influence these perceptions. It is clear that more research is required to address these issues. Ultimately, accounting for all participants in physical activity settings that are perceived as intended, regardless of orientation and perception altering influences, would aid in the development of settings that lead to adaptive behaviors or provide strategies to deal effectively with adverse outcomes.

CHAPTER THREE - METHODS

Participants

The participants for this study included children ages 7 through 15 who participated in weekly semi-competitive and competitive badminton programs in two different Edmonton sports clubs. The total sample of 41 subjects consisted of 22 males and 19 females. The mean age for the total sample was 9.8 years. Only participants for whom informed consent was received took part in the study.

Measures

Task and Ego Orientation in Sport Questionnaire

A modified version of the Task and Ego Orientation in Sport Questionnaire (TEOSQ) (Duda, 1989; Duda & Nicholls, 1992) (see Appendix A) was used to measure children's achievement motivation in badminton class. According to Nicholls, Cobb, Yackel, Wood, and Wheatley (1992), the goals associated with task and ego performance orientations are apparent by the second grade, lending support to the selection of a sample wherein the youngest participant was 7 years old. This 13 item questionnaire consists of two scales, with 7 items designed to measure task mastery orientation and 6 items to measure ego orientation. Reported in the form of coefficient alpha (Cronbach, 1951) the internal consistency of the task mastery and ego orientation scales range from .74 to .86 and .75 to .90 respectively, demonstrating high internal consistency (Duda, 1992; White & Duda, 1993). Participants responded to each statement on the questionnaire using a 5-

point Likert scale ranging from strongly disagree (1) to strongly agree (5). As the context for this study was badminton class, some of the statements on the TEOSQ were modified in order to maintain consistency with the activity setting. Each statement was preceded by the stem "I feel most successful in badminton class when...". This is in keeping with similar modifications made to the stem of the questionnaire to accommodate different settings/sporting environments (Causgrove Dunn, 1997).

Perception of Goal Structure Questionnaire

In order to examine children's perceptions of the goal structure in badminton class, the Perception of Goal Structure Questionnaire (PGSQ) was developed (see Figure 1). The Perceived Motivational Climate in Sport Questionnaire (PMCSQ, Seifriz, Duda, & Chi, 1992) was used as a guideline for the formatting of the PGSQ. Definitions of the three different goal structures provided in the literature (Ames & Ames, 1984a, 1984b; Johnson & Johnson, 1975, 1985) were used to formulate differential statements for the questionnaire. Using the actual definitions from the literature contributed to the content validity of the instrument. A total of 15 statements were identified as reflective of the three goal structures and formulated 3 subscales, each containing 5 items. Participants indicated their level of agreement with each item using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Experts, researchers familiar with goal structure theory and motivational climate, and who have worked closely with children, reviewed the statements to confirm coherence between the literature definitions and the statements developed for the questionnaire contributing to the face validity of the

The Perception of Goal Structure Questionnaire

Directions: Please read each of the statements listed below and indicate how much you personally agree with each statement by circling the appropriate response. There are no right or wrong answers.

In this badminton activity...	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Others depend on me.	SD	D	N	A	SA
Only one player can be the best.	SD	D	N	A	SA
It doesn't matter who is the best player.	SD	D	N	A	SA
Encouraging and cheering for others is important.	SD	D	N	A	SA
Players work together as a team toward the same goal.	SD	D	N	A	SA
It is important to do better than the other players.	SD	D	N	A	SA
It only matters what I am doing not what the other players are doing.	SD	D	N	A	SA
If one person in the group doesn't do well the whole group doesn't do well.	SD	D	N	A	SA
Each player has an important part to play.	SD	D	N	A	SA
If there are good players it is hard to do well.	SD	D	N	A	SA
I work on my technique.	SD	D	N	A	SA
I play against myself.	SD	D	N	A	SA
How others do is important.	SD	D	N	A	SA
Only one player can win.	SD	D	N	A	SA

Figure 1. The Perception of Goal Structure Questionnaire.

instrument. Finally, a pilot study was conducted with children to examine the appropriateness of the language level used in the PGSQ.

Pilot Study

Participants

The participants in the pilot study consisted of 4 children, 3 boys and 1 girl, all 6 years of age. As the age range of participants in the primary study was from 7-15 years, 6 years of age was selected as a conservative indicator of the language comprehension level of the younger participants in the primary study. Only children for whom informed consent was received participated in the pilot study.

Procedure

Prior to filling out the PGSQ, the 4 subjects participated in three different goal structure activities on three different occasions. Each activity was designed to represent a particular goal structure and was implemented within the children's regular badminton classes. Another badminton instructor was present to confirm that the three activities were in fact representative of the three different goal structure definitions provided in the literature.

Following participation in an activity, the children were led through the statements on the PGSQ. The statements were read out loud one at a time and the children were asked to tell the researcher what they thought each statement meant. The interviews were done in a one on one situation to prevent the children from being influenced by their peers when answering the questions. Although the children did fill

out the questionnaire, language comprehension and statement interpretation were of primary concern, therefore the children's responses on the questionnaire itself were not analyzed.

Results and Discussion

Based on the interviews with the children a few statements were modified. Of primary concern were questions that contained more than one concept. For example, the cooperative statement "it is important to try hard because others depend on me," was reduced to "others depend on me". The concept of trying hard appeared to outweigh the idea that the activity also required a cooperative effort. This perceived imbalance led to the children paraphrasing the statement by describing the importance of exerting effort, but neglecting to include information regarding the latter half of the statement. Statements containing more than one concept that were accurately summarized by the participants were maintained.

The children's language comprehension of the statements appeared relatively unproblematic. Only one statement, "I work on my technique" presented some difficulty in understanding. This statement was maintained however, as other possible alternatives required lengthening the phrase in order to conserve the main idea. The meaning of the word technique was described and clarified during the primary study.

Because of the limited number of subjects used in the pilot and primary studies, a further study using a larger number of subjects (n~200) is recommended to test the PGSQ using techniques such as those suggested in Dunn, Bouffard and Rogers (1999).

Data Collection Procedures

Step One

Following the receipt of informed consent, participants in the primary study filled out the TEOSQ in a 10 minute period during their regular badminton lesson. This questionnaire was administered to groups of no more than 4 children at one time by the researcher/badminton instructor. Each statement was read aloud for children ages 7 through 9, while the older children completed the questionnaire independently. In combination with the instructions at the top of the questionnaire, all participants were also given the following directions:

> "This is a questionnaire that asks you about what makes you feel most successful in badminton class. Your answers may be the same or different from your friends, but it is important to answer on your own. This is not a test, there are no right or wrong answers, what is most important is being honest about what you think. Please circle the number that tells how much you agree or disagree with each of the sentences on the questionnaire".

Step Two

Step two of the data collection process involved the children taking part in three different structured badminton activities. Each activity was developed according to the literature descriptions of competitive, cooperative, and individualistic goal structures. The order in which the children took part in the activities was systematically varied to control for order of activity participation influencing activity perception. All three activities were participated in during the same lesson. Participation in each activity was separated by as much time as possible based on the length of each lesson to help control for possible testing effects.

As all the activities implemented were the same as or similar to those activities which had previously been implemented within the everyday class structure, the goal structured activities were presented to the children as regular components of their badminton lessons. The competitive goal structure involved children playing singles games against other children in their badminton class. Opponents were assigned based on comparable skill levels and playing ability to help maintain the competitive aspect of the activity. The cooperative structure involved children working together toward a common goal of rallying the bird back and forth as many times as possible. A maximum of 6 children took part in the cooperative activity at one time. Half of the group was on each side of the net lined up one behind the other (in this case 3 children in each line, on each side). Players with less experience were asked to hit the shuttle once to the child at the front of the line on the other side of the net, then return to the end of the line on their respective side of the court until they came to the front of the line again, at which point they would repeat the same process. Following hitting the shuttle, the more experienced players would run around to the opposite side of the court to await their next turn and repeat the same process until the rally ended. The children were instructed to hit the shuttle back and forth as many times as possible as a group and to continue with the activity for approximately 5-10 minutes. Comparisons between group scores were avoided by having only one group participate in the activity while the other children in the lesson continued with regular activities. Finally, the individualistic activity involved the children hitting the shuttle up and down on their rackets or against a wall practicing various different skills. They were encouraged to practice both forehand and backhand

shots as well as varying the height and speed of their shots. The individual aspect of this activity was emphasized by having only a few children participate at a time and spread out across the entire gym so as not to be distracted by others or the performance of others.

Following participation in each of the structured activities, the children were asked to fill out the PGSQ. Once again each statement was read aloud for children ages 7 through 9 while the older participants completed the questionnaire independently. All participants were given the following instructions:

> "In front of you is a questionnaire that asks about the badminton activity you just finished doing (the activity is identified). These questions ask about what you think, so there are no right or wrong answers and it is not a test. Please circle the number that tells how much you agree or disagree with each sentence about the activity you just finished doing. Remember it is only asking about the activity you just finished doing (identify activity again) not any other type of badminton game or practicing you have done before".

Following the completion of all the data collection, questions regarding the purpose of the study were answered and children were thanked for their participation. No additional debriefing was required as the structured activities remained well within the normal realm of activities for all of the badminton classes and no psychological harm could be anticipated by participating in the study. A total of one month was required for the entire data collection process.

Data Accuracy

The accuracy of the data collection process was augmented by having the same teacher/researcher administer all the questionnaires and organize the children in the

various goal structure activities. In addition to this consistency in administration, the teacher/researcher was someone with whom the children were familiar, thereby alleviating extra time normally required to ensure the participants were at ease during the data collection period. As well, this familiarity likely enhanced children's willingness to ask questions openly. Systematically varying the order of activity participation and maintaining small groups for each activity also aided in controlling external variables. Finally, lesson normalcy was preserved as much as possible by the presence of other instructors and children who were not taking part in the study continuing participation in similar badminton activities.

Data Analysis

Data analysis of the perception of the intended goal structure involved using t-tests for dependent samples. The responses of participants on each goal structure subscale were compared to the responses on the same subscale in the other two settings. In other words, responses on the cooperative subscale (five questions) in the cooperative environment were compared to responses on the cooperative subscale in each of the other goal structured settings. Comparisons were made across settings within the subscales because of a lack of data to compare relative values of responses across subscales. For example, comparisons across settings within the individualistic goal structure did not yield the expected differences as scores on the individualistic subscales remained high. It was not assumed that a 3 on the competitive scale was necessarily equal to a 3 on the other two subscales. A total of six t-tests were completed, two for each of the subscales.

The relationship between achievement motivation and perception of the goal structure was explored using the Pearson product-moment correlation. Specifically, the scores on the ego orientation subscale and the task mastery subscale were correlated with the competitive, cooperative and individualistic subscale responses.

CHAPTER FOUR - RESULTS

Introduction

The primary purpose of this study was to examine children's perceptions of the goal structures implemented within their badminton class. Specifically of interest was whether or not children perceived the goal structure in the same way as intended by the teacher/researcher implementing the activity. As well, this study explored whether or not boys tended to see more elements of competition than girls, across all goal structures. A secondary purpose was to explore the possible relationship between this perception and achievement motivation: specifically, whether or not a high ego performance orientation was related to the interpretation of goal structures as more competitive, and whether or not a high task mastery performance orientation was associated with the perception of goal structures as more cooperative.

Analysis of Responses on the PGSQ

Descriptive data, means and standard deviations were calculated for responses on each subscale of questions on the PGSQ in each goal structure setting. Individual mean scores for the responses on the PGSQ were also calculated and reviewed for the examination of outliers, however no extreme scores were eliminated. All scores were maintained for two reasons:

1. The PGSQ still requires testing to further substantiate it as a valid and reliable instrument. Extreme scores might be helpful in revealing where any questionnaire/statement difficulties remain.

2. Extreme scores might later be explained by differences in achievement motivation.

Responses on the PGSQ were analyzed using t-tests for correlated samples. The descriptive data for the responses on the PGSQ are displayed in Table 1.

Table 1

Means and Standard Deviations of Responses on the PGSQ by Subscale and Implemented Goal Structure

	Subscales					
	Competitive		Cooperative		Individualistic	
Structure	M	SD	M	SD	M	SD
Competitive	15.10	4.83	13.98	4.17	18.85	3.23
Cooperative	10.34	3.64	21.10	3.23	17.37	3.48
Individualistic	10.80	4.92	10.76	4.90	21.83	2.77

Note. The descriptive data were examined vertically for differences within each subscale between the various implemented goal structures.

The comparisons between the responses on the competitive, cooperative, and individualistic subscales within each of the goals structure settings was made using paired samples t-tests. Responses on the competitive subscale questions in the competitive goal structure, were compared to the responses on the same subscale of questions in both the cooperative and individualistic settings. Likewise, the cooperative question responses in the cooperative goal structure were compared to the responses on the same subscale in the competitive and individualistic structures. Finally, the individualistic subscale responses in the individualistic setting were compared to responses on the individualistic questions in the competitive and cooperative goal structures. As a total of 6 paired sample t-tests were performed, a Bonferonni correction of .01 was implemented to protect against a Type 1 error. The analysis clearly revealed significant differences between subscale responses in the different goal structure settings, leading the acceptance of the researcher's hypothesis.. The outcome of this analysis can be seen in Table 2. All t-tests demonstrated significant differences, indicating that participants perceived that the competitive goal structure was more competitive than the cooperative and individualistic goal structures, as described by the five statements reflecting competition. These differences also demonstrated that the cooperative structure was perceived as more cooperative than the competitive and individualistic structures, as described by the five statements reflecting cooperation. Finally, the individualistic structure was perceived as more individualistic than the competitive and cooperative structures, as described by the five statements reflecting individualism.

Table 2

Paired Samples T-Test for the Responses on the 3 Subscales in the 3 Goal Structures

			99% Confidence Interval of the Difference		
Pairs	n	Mean Difference	Lower	Upper	t
1 PC-IC	41	4.76	2.79	6.72	6.55*
2 CC-IC	41	4.29	1.86	6.73	4.73*
3 PP-CP	41	-7.12	-9.43	-4.82	-8.36*
4 PP-IP	41	10.34	7.55	13.14	10.01*
5 II-CI	41	-2.98	-4.67	-1.28	-4.74*
6 II-PI	41	-4.46	-6.37	-2.56	-6.34*

Note. CC = competitive goal structure, competitive subscale; PC = cooperative goal structure, competitive subscale; IC = individualistic goal structure, competitive subscale; CP = competitive goal structure, cooperative subscale; PP = cooperative goal structure, cooperative subscale; IP = individualistic goal structure, cooperative subscale; CI = competitive goal structure, individualistic subscale; II = individualistic subscale, individualistic goal structure; PI = cooperative goal structure, individualistic subscale.

*$p < .01$.

Relationship of Achievement Motivation and Perception of Goal Structure

The mean for scores on the ego and task mastery orientation were 18.0 (SD = 5.30) and 30.6 (SD = 3.75) respectively. The correlation between the two subscales of the TEOSQ was not significant (r = 0.22) indicating that the two subscales were not related. This result is consistent with the findings of previous studies (Duda, 1992; Duda & White, 1992). The Pearson product-moment correlation coefficient (r) was used to examine the hypothesized relationship between perception of the goal structure and achievement motivation. This correlation was examined using the scores from the TEOSQ questionnaire and the three goal structure subscales. It was hypothesized that children high in ego would tend to perceive more competition across all settings indicated by their responses on the competitive subscale in each of the activities. Thus, a positive correlation between scores on the ego subscale of the TEOSQ and the competitive subscale of the PGSQ across all settings was predicted. Likewise, it was predicted that children high in mastery would be more likely to perceive more cooperative and individualistic elements as indicated on these subscales in all of the structured settings, regardless of the actual implemented goal structure.

The results of the correlations between orientations and subscales are shown in Table 3.

Table 3

Correlation Between Goal Orientations and Perception of Goal Structures

	r	
Subscale	Ego Orientation	Task/Mastery Orientation
Competitive	0.28	-0.04
Cooperative	0.25	0.33*
Individualistic	0.14	0.51**

* $p < .05$. ** $p < .01$.

According to the data there was no significant correlation between scores on either the ego and mastery scales of the TEOSQ and responses on the competitive subset of questions. Likewise no significant correlation was found between scores on the ego subscale and responses on the cooperative and individualistic questions. Significant correlations were found between scores on the mastery subscale and each of the cooperative and individualistic subscales. A correlation of 0.33 between the mastery and cooperative subscales was significant at the 0.05 level with a common variance of 0.11. A correlation of 0.51 between the mastery and individualistic subscales was found to be significant at the 0.01 level with a common variance of 0.26. Scattergrams of the two significant correlations were also created using a 95% confidence interval (see Figures 2 & 3).

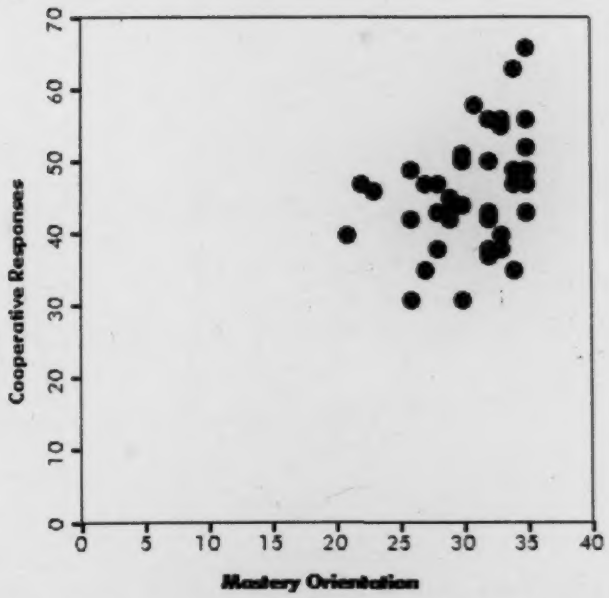

Figure 2. Scattergram of the correlation between responses on the cooperative subscales and mastery orientation.

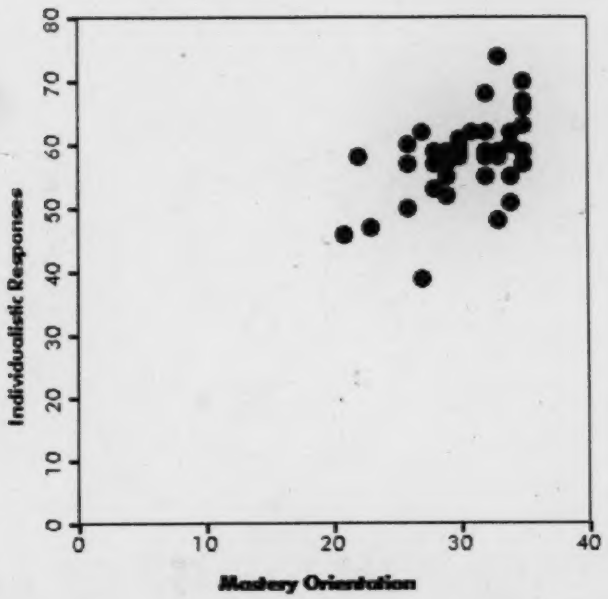

Figure 3. Scattergram of the correlation between responses on the individualistic subscales and mastery orientation.

CHAPTER FIVE - DISCUSSION

The results of this study provided support for children's ability to perceive the implemented goal structure within an activity in the same way as intended by the researcher/instructor. Partial support was provided for the hypothesized relationship between achievement motivation and the perception of the goal structures. There was no significant correlation between TEOSQ ego scores and the competitive subscales, however significant postitive correlations were found between the TEOSQ mastery scores and the cooperative and individualistic subscales respectively.

Perception of Goal Structures

Despite lack of full psychometric evaluation of the statements that comprise each of the subscales of the PGSQ, the proximity of these statements to the definitions of the goal structures provided in the literature from which they were derived, lend confidence that the statements adequately captured the construct being tested. Furthermore experts agreed that the statements captured the intended dimensions of the construct, and pilot testing revealed that children as young as 6 years of age interpreted the statements as intended by the experts. Experts consisted of one professor and graduate student/badminton instructor. The professor had a PhD in the area of adapted physical activity; had many refereed journal publications; was employed at a Canadian university; and, had worked closely in the areas of physical activity and children for over 20 years. The graduate student had studied in the area of physical activity for 3 years; had instructed badminton to children for 7 years; and, had competed at various levels of sport

for 19 years. Data analysis proceeded therefore on the assumption that scores on the five 'competitive' statements adequately captured perceptions of competition in a specific activity. High scores reflected strong perceptions of competition in the goal structure. Similar assumptions were made for the cooperative and individualistic subscales.

It was not assumed however, that the subscales and the statements which comprised them, reflected the same metric (that is that a 4 on a perception of competition statement reflected the same 'strength of perception' as a 4 on a cooperative statement). Indeed, it is clear that the scores generally given on 'individualistic' statements were uniformly high, while the scores on the competitive subscale were clearly lower. As a result, all comparisons were done on the same dependent variable, and the scores on different subscales were not compared.

Results of the t-tests for paired samples indicated significant differences between the responses on each subscale in its matched setting and the same subscale responses in the other two settings. Children gave higher responses to the questions of perceived competitiveness in the competitive setting, compared to the cooperative and individualistic settings. The same pattern was clear in the other structures. These significant differences lead to the interpretation that the children in the present study were able to distinguish between the goal structures of the three activities implemented within their badminton classes. Not only did these results indicate significant differences, but these differences consistently indicated that the perception of each goal structure corresponded with the intention of the instructor/researcher who implemented the structure.

These results suggest that the descriptions of competitive, cooperative and individualistic goal structures (Ames & Ames, 1984a, 1984b; Johnson & Johnson, 1975, 1985) provided in the literature and used for questionnaire and activity development, are useful in describing and discriminating between the various implemented goal structure activities. It appears that the children in this study were able to distinguish between the dominating features of each goal structured activity. It cannot be stated however with complete certainty that these accurate perceptions are without influence. Despite the significant differences found among children in perceptions of each goal structure in badminton class, it is still critical to examine other influencing factors that may have affected these perceptions. Another consideration is that badminton is, with the exception of doubles play, primarily an individual sport and that the actual organization of this sport may have influenced the way in which structured activities would be perceived. A sport that is more inherently team focused, such as soccer, might have yielded a different set of results.

Perception of Goal Structures and Achievement Motivation

In this study the results did not provide support for the hypothesis that there would be a positive correlation between the children's perceptions of the competitive goal structure across all settings and the degree to which they were identified as ego performance oriented. These results are contrary to many findings that support the relationship between high ego orientation and the perception of competition in achievement settings (Duda, 1989, 1992. Although this study did not support the

hypothesized relationship several possible explanations exist for the lack of positive correlation between ego orientation and viewing competition across all settings. It is possible that a lack of variability in the use of the entire range of possible responses on the ego subscale did not yield enough high end scores to yield a significant correlation. Also it is possible that some of the younger children in the study were still developing in terms of goal orientation and did not respond by using extreme scores on the questionnaire.

Support was provided however, for the hypothesis that there would be a positive correlation between the children's perceptions of the cooperative and individualistic goal structures and the degree to which they were identified as task mastery oriented. This result is consistent with Duda's findings (1989, 1992). Important to consider however is the low common variance found between these correlations indicating that although the correlation was significant, there is need for further investigation into the strength of these relationships Also critical to consider is the method by which these structured activities were implemented. Instructions for the competitive structure were simply to play a game of singles, winning was deliberately not emphasized, whereas for the cooperative and individualistic structures instructions were more detailed leaving less room for individual interpretation.

Support was not found for the hypothesis that there would be a negative correlation between the children's perceptions of the competitive goal structure across all settings and the degree to which they were identified as task mastery oriented. This supports the idea that although an individual may be high in task mastery it does not

indicate a lesser degree of achievement orientation. An individual high in mastery orientation may still have a strong desire to perform at a high level within competitive settings although they may not be high in ego orientation. As well, these results support findings that task and ego orientations are in fact orthogonal (Duda, 1989, 1992; Duda & Nicholls, 1992).

Support was also not found for a negative correlation between the children's perceptions of the cooperative goal structure across all settings and the degree to which they were identified as ego performance oriented. Once again this result could be explained by a lack of high scores on the ego scale of the TEOSQ and also supports the orthogonal nature of ego and task mastery orientation.

Implications

On the level of activity development and practical application, the results of this study suggest that children are capable of perceiving the intended goal structure of an activity, indicating that a teacher/instructor would be able to determine some of the particular perceptions of an implemented activity. Important to consider however, is the degree to which the particular activity can be completely separated into different goal structures. It may be more difficult to make the differentiation between goal structure activities absolute. From a theoretical stand point the degree to which psychological, social and other influencing variables affect these perceptions still requires further exploration. It appears that a task mastery orientation does influence the perception of cooperation and individualism across all settings as expected, but the expected

relationship between ego orientation and the perception of competition was not confirmed.

CHAPTER SIX - SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to explore children's perceptions of different goal structures within their badminton classes. Of particular interest was whether or not children were able to distinguish between the competitive, cooperative and individualistic goal structured activities in the same way as intended by the teacher who developed and implemented the activities. During this process the usefulness of the literature descriptions for activity development and implementation was also examined. A secondary purpose was to examine the relationship between goal orientation and these perceptions. Three major questions were of interest:

1. Do children perceive differences in the goal structures implemented within their badminton class?

2. If children do perceive differences in goal structures, are these differences congruent with those of the teacher/instructor?

3. What is the relationship between individual achievement motivation and the perception of the goal structures?

Forty-one children (22 boys and 19 girls) between the ages of 7 and 15 from two Edmonton sports clubs participated in this study. All participants completed the Task and Ego Orientation in Sport Questionnaire, participated in three different goal structured activities and completed the Perception of Goal Structure Questionnaire immediately following participation in each activity. The differences in perception of the goal structures was examined using paired samples t-tests. The relationships between goal

orientation and perception of the goal structures were determined using Pearson product moment correlations.

The results of this study provided partial support for the theoretical predictions made regarding the perception of goal structures and the influence of goal orientation on these perceptions. It was determined that the children in this study did perceive the differences in goal structure activities in the same way as intended by the instructor. There was a significant positive correlation between the perception of cooperation across all settings and the degree to which participants were task mastery oriented. Ego orientation was not related to the perception of competition across all settings.

The following hypotheses were confirmed by the results in this study:
For children participating in semi-competitive and competitive badminton programs,

1. There was a difference between children's perceptions of each goal structure implemented within their badminton class. These differences reflected the same differences in the intention of the instructor who developed and implemented the structure.

3. There was a positive correlation between children's perceptions of the cooperative and individualistic goal structures and the degree to which they were task mastery oriented.

Other hypotheses regarding the relationships between the perception of competition across all settings to ego and mastery orientations were not supported. As well no relationship was found between children's perception of the cooperative goal structure across all settings and the degree to which they were identified as ego

performance oriented.

Conclusions

The findings of this study provided support for the hypothesis that children were capable of distinguishing between different goal structures and that this differentiation corresponded with the intentions of the teacher who implemented the activities. The findings suggest that activity development for the purpose of enhancing desired student response is at least partially within the grasp of the teacher. Findings also supported the hypothesis that children high in task mastery orientation would perceive more elements of cooperation across all settings. This suggests that goal orientation is a mediating factor of perception and should be considered when implementing activity within an organized physical activity setting. The lack of a relationship between ego orientation and seeing competition across all settings contradicts the preceding statements, but may be explained by a deficiency in extreme high scores on the TEOSQ ego scale or that ego orientation may simply not function in the same manner.

Recommendations

The present study was done to investigate children's perceptions of goal structures in badminton class. Although the results did provide support for children's ability to distinguish between the different goal structures, it is important to examine perception in a variety of sports and activities. Badminton, as a primarily individual sport would provide different structure development and implementation challenges than a primarily

team focused sport such as soccer. It is important that goal structure perceptions be examined in sport and physical activity settings in individual and team sports, in organized physical activity and free play to determine environmental factors that might influence perception.

Although the literature descriptions of competitive, cooperative and individualistic goal structures were found to be useful for activity and questionnaire development, a thorough analysis of each statement on the Perception of Goal Structure Questionnaire needs to be completed with a larger number of participants. This would ensure that statements are not only reflective of particular structures, but are also mutually exclusive. Affirming exclusivity among statements would determine when actual conflict or crossover occurs between goal structures. Ensuring that statements reflect only one goal structure at a time would allow participants to differentiate more easily between different goal structure activities.

Future studies should also attempt to examine the relationship between perception and goal orientation by scores on both subscales to determine relationships contingent on particular combinations of ego and task mastery orientations . As well participants representing all possible combinations (high ego& high task, low ego & low task, high ego & low task, high task & low ego) should be examined for differences in perception.

Continuing to examine the factors that influence the perception of goal structures, beyond that of goal orientation is critical to understanding what factors are most influencial for children when deciding whether or not to take part and how they will take part in physical activity. Most research that has been done in this area has used a

quantitative approach. Combining this approach with an open ended interviewing process would allow for children to individualize themselves in the eyes of this researcher. This could only enrich implemented goal structures as they would be designed to enhance the experience of each child taking part by taking into account individual need. Finally the most practical application for this study is to include activities of all goal structure types to maintain equilibrium in the child's sporting experience inclusive of opportunities for success and learning from failure.

References

Ames, C. (1984). Achievement attributions and self-instructions under competitive and individualistic goal structures. Journal of Educational Psychology, 76(3), 478-487.

Ames, C. (1992). Achievement goals, motivational climate, and motivational processes. In G. C. Roberts (Ed.), Motivation in Sport and Exercise (pp. 161-176). Champaign, IL: Human Kinetics.

Ames, C., & Ames, R. (1981). Competitive versus individualistic goal structures: The salience of past performance information for causal attributions and affect. Journal of Educational Psychology, 73(3), 411-418.

Ames, C., & Ames, R. (1984a). Goal structures and motivation. The Elementary School Journal, 85(1), 39-52.

Ames, C., & Ames, R. (1984b). Systems of student and teacher motivation: Toward a qualitative definition. Journal of Educational Psychology, 76(4), 535-556.

Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. Journal of Educational Psychology, 80(3), 260-267.

Benham, T. (1985). Affective development and the young athlete. Physical Educator, 42(1), 34-40.

Bird, A. M., Cripe, B. K., & Morrison, N. L. (1980). Children and stress. Journal of Physical Education and Recreation, 51(5), 28-29, 62.

Bouffard, M., Watkinson, E. J., Thompson, L. P., Causgrove Dunn, J. L., & Romanow, S. K. E. (1996). A test of the activity deficit hypothesis with children with movement difficulties. Adapted Physical Activity Quarterly, 13, 61-73.

Brown, L., & Grineski, S. (1992). Competition in physical education: An educational contradiction. Journal of Physical Education, Recreation and Dance, 63(1), 17-19.

Causgrove Dunn, J. (1997). Individual differences in personal situational factors related to motivation and achievement behaviour in physically awkward children. Unpublished doctoral dissertation, University of Alberta, Edmonton, Alberta, Canada.

Covington, M. V., & Omelich, C. L. (1984). Task-oriented versus competitive learning structures: Motivational and performance consequences. Journal of Educational Psychology, 76(6), 1038-1050.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16, 297-334.

Dembo, M. H., & McAuliffe, T. J. (1987). Effects of perceived ability and grade status on social interaction and influence in cooperative groups. Journal of Educational Psychology, 79(4), 415-423.

Duda, J. L. (1989). Relationship between task and ego orientations and the perceived purpose of sport among high school athletes. Journal of Sport and Exercise Psychology, 11, 318-335.

Duda, J. L. (1992). Motivation in sport settings: A goal perspective approach. In G.C. Roberts (Ed.), Motivation in Sport and Exercise (pp. 57-91). Champaign, IL: Human Kinetics.

Duda, J. L. (1996). Maximizing motivation in sport and physical education among children and adolescents: The case for greater task involvement. Quest, 46, 290-302.

Duda, J. L., & Nicholls, J. G. (1992). Dimensions of achievement motivation in schoolwork and sport. Journal of Educational Psychology, 84(3), 290-299.

Duda, J. L., & White, S. E. (1992). Goal orientation and beliefs about the causes of sport success among elite skiers. The Sport Psychologist, 6, 334-343.

Dunn, J. G. H., Bouffard, M., & Rogers, W. T. (1999). Assessing item content-relevance in sport psychology scale-construction research: Issues and recommendations. Measurement in Physical Education and Exercise Science, 3(1), 15-36.

Dweck, C. S. (1985). Intrinsic motivation, perceived control, and self-evaluation maintenance: An achievement goal analysis. In C. Ames 7 R. Ames (Eds.), Research on Motivation in Education: Vol 2. The Classroom Milieu (pp. 289-305). Orlando: Academic Press.

Ebbeck, V., & Becker, S. L. (1994). Psychosocial predictors of goal orientations in youth sport. Research Quarterly for Exercise and Sport, 65, 355-362.

Enns, F. (1996). Perception in the study of administration. The Canadian Administrator, 5(6), 8-23.

Fait, H., & Billings, J. (1974). Reassessment of the value of competition. In H. McGlynn (Ed.), Issues in Physical Education and Sports (pp. 15-21). Palo Alto, CA: National Press Books.

Fox, K., Gouda, M., Biddle, S., Duda, J., & Armstrong, N. (1994). Children's task and ego goal profiles in sport. The British Psychological Society, 64, 253-261.

Hager, P. F. (1995). Redefining success in competitive activities. Journal of Physical Education, Recreation and Dance, 66(5), 26-30.

Jagacinski, C. M., & Nicholls, J. G. (1984). Conceptions of ability and related affects in task involvement and ego involvement. Journal of Educational Psychology, 76(5), 909-919.

Johnson, D. W., & Johnson, R. T. (1975). Learning together and alone: Cooperation, competition and individualization. Englewood Cliffs, New Jersey: Prentice Hall.

Johnson, D. W., & Johnson, R. T. (1981). Effects of cooperative and individualistic learning experiences on interethnic interaction. Journal of Educational Psychology, 73(3), 444-449.

Johnson, D. W., & Johnson, R. T. (1985). Motivational processes in cooperative, competitive, and individualistic learning situations. In C. Ames & R. Ames (Eds.), Research on Motivation in Education: Vol 2. The Classroom Milieu (pp. 249-286). Orlando: Academic Press.

Kavussanu, M., & Roberts, G. C. (1996). Motivation in physical activity contexts: The relationship of perceived motivational climate to intrinsic motivation and self-efficacy. Journal of Sport and Exercise Psychology, 18, 264-280.

Kulewicz, S. (1981). The children, not the games. Journal of Physical Education and Recreation, 52(4), 67-69.

LeDrew, J. E. (1997). Women and primary physical education: A lesson in female-friendly values. Canadian Association for Health, Physical Education, Recreation and Dance, 63, 15-19.

Marsh, W. L. (1970). Teacher and student perceptions of school climate. Unpublished master's thesis, University of Alberta, Edmonton, Alberta, Canada.

Marshall, J. D., & Bouffard, M. (1997). The effects of quality daily physical education on movement competency in obese versus nonobese children. Adapted Physical Activity Quarterly, 14, 222-237.

Martinek, T., & Karper, W. (1984). The effects of noncompetitive and competitive instructional climates on teacher expectancy effects in elementary physical education classes. Journal of Sport Psychology, 6, 408-421.

Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. Psychological Review, 91(3), 328-346.

Nicholls, J. G. (1992). The general and the specific in the development and expression of achievement motivation. In G. Roberts (Ed.), Motivation in sport and exercise, (pp. 31-54). Champaign, IL: Human Kinetics.

Nicholls, J. G., Cobb, P., Yackel, E., Wood, T., & Wheatley, G. (1990). Students' theories of mathematics and their mathematical knowledge: Multiple dimensions of assessment. In G. Klum (Ed.), Assessing Higher Order Thinking in Mathematics, (pp. 137-157). Washington, DC: American Association for the Advancement of Science.

Orlick, T. D. (1986). Evolution in children's sport. In M. Weiss & D. Gould (Eds.), Sport for children and youths (pp. 169-178). Champaign, IL: Human Kinetics.

Orlick, T. D., Zitzelsberger, L. (1996). Enhancing children's sport experience. In F. L. Smoll & R. E. Smith (Eds.), Children and Youth in Sport: A Biopsychosocial Perspective (pp. 330-337). Madison WI: Brown & Benchmark.

Papaioannou, A. (1995). Differential perceptual and motivational patterns when different goals are adopted. Journal of Sport and Exercise Psychology, 17, 18-34.

Papaioannou, A., & Macdonald, A. (1993). Goal perspectives and purposes of physical education as perceived by Greek adolescents. Physical Education Review, 16, 41-48.

Roberts, G. C. (1992). Motivation in sport and exercise: Conceptual constraints and convergence. In G. C. Roberts (Ed.), Motivation in Sport and Exercise (pp. 3-29). Champaign, IL: Human Kinetics.

Sallis, J. F., Patterson, T. L., Buono, M. J., & Nader, P. R. (1988). Relation of cardiovascular fitness and physical activity to cardiovascular risk factors in children and adults. American Journal of Epidemiology, 127, 933-941.

Seifriz, J. J., Duda, J. L., & Chi, L. (1992). The relationship of perceived motivational climate to intrinsic motivation and beliefs about success in basketball. Journal of Sport and Exercise Psychology, 14, 375-391.

Simons-Morton, B. G., Baranowski, T., O'Hara, N. M., Parcel, G. S., Huang, I. W., & Wison, B. (1990). Children's frequency of participation in moderate to vigorous physical activities. Research Quarterly for Exercise and Sport, 64, 418-424.

Skon, L., Johnson, D. W., & Johnson, R. T. (1981). Cooperative peer interaction versus individual competition and individualistic efforts: Effects on the acquisition of cognitive reasoning strategies. Journal of Educational Psychology, 73(1), 83-92.

Solomon, M. A. (1996). Impact of motivational climate on students' behaviors and perceptions in a physical education setting. Journal of Educational Psychology, 88(4), 731-738.

Treasure, D. C., & Roberts, G. C. (1995). Applications of achievement goal theory to physical education: Implications for enhancing motivation. Quest, 47, 475-489.

Vlachopoulos, S., & Biddle, S. J. H. (1997). Modeling the relation of goal orientations to achievement-related affect in physical education: Does perceived ability matter? Journal of Sport and Exercise Psychology, 19, 167-187.

Walling, M. D., & Duda, J. L. (1995). Goals and their associations with beliefs about success in and perceptions of the purposes of physical education. Journal of Teaching in Physical Education, 14, 140-156.

Walling, M. D., Duda, J. L., & Chi, L. (1993). The perceived motivational climate in sport questionnaire: Construct and predictive validity. Journal of Sport and

Exercise Psychology, 15, 172-183.

Ward, D. S. (1982). Student perception of the classroom learning environment in physical education. Journal of Teaching in Physical Education, 2(1), 19-28.

White, S. A., & Duda, J. L. (1993). Dimensions of goals and beliefs among adolescent athletes with physical disabilities. Adapted Physical Activity Quarterly, 10, 125-136.

White, S. A., & Duda, J. L. (1994). The relationship of gender, level of sport involvement, and participation motivation to task and ego orientation. International Journal of Sport Psychology, 25, 4-18.

Williams, L. (1994). Goal Orientations and athletes' preferences for competence information sources. Journal of Sport & Exercise Psychology, 16, 416-430.

Winne, P. H., & Marx, R. W. (1982). Students' and teachers' views of thinking processes for classroom learning. The Elementary School Journal, 82(5), 493-518.

Appendix A

The Modified Task and Ego Orientation in Sport Questionnaire

Directions: Please read each of the statements listed below and indicate how much you personally agree with each statement by circling the appropriate response.

I feel most successful in badminton class when...	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I'm the only one who can do the skill.	SD	D	N	A	SA
I learn a new skill and it makes me want to practice more.	SD	D	N	A	SA
I can do better than others in the lesson.	SD	D	N	A	SA
The other players can't do as well as me.	SD	D	N	A	SA
I learn something that is fun to do.	SD	D	N	A	SA
Other players mess-up and I don't.	SD	D	N	A	SA
I learn a new skill by trying hard.	SD	D	N	A	SA
I work really hard.	SD	D	N	A	SA
I score the most points,	SD	D	N	A	SA
Something I learn makes me want to go and practice more.	SD	D	N	A	SA
I'm the best.	SD	D	N	A	SA
A skill I learn feels really right.	SD	D	N	A	SA
I do my very best.	SD	D	N	A	SA